REMARKS

In response to the above-identified Office Action, Applicant seeks reconsideration of the application. In this response, no claims have been canceled, no claims have been added, and no claims have been amended. Accordingly, Claims 1-27 are pending.

I. Claims Rejected under 35 U.S.C. §102(e)

In the Office Action, the Examiner rejects Claims 1-27 under 35 U.S.C. § 102(e) as being unpatentable by U.S. Patent No. 6,564,328 issued to Grochowski et al. (Grochowski). Applicant respectfully traverses this rejection.

Applicant notes that, to anticipate a claim, every element of the claim must be disclosed within a single reference. Thus, if even one feature of rejected claims is not found in Grochowski, Applicant respectfully requests that the rejection of corresponding claim(s) under 35 U.S.C. § 102(e) as being anticipated by Grochowski be withdrawn.

Independent Claim 1 recites a microprocessor comprising [1] at least one throttling mechanism; and [2] a thermal control subsystem to estimate an amount of power used by said microprocessor and to control the throttling mechanism based on the estimated power usage. The claimed thermal control subsystem is in communication with at least one counter and estimates the amount of power used by the microprocessor based on information provided by the at least one counter.

Applicant respectfully submits that Grochowski does not teach or suggest a thermal control subsystem that "estimates the amount of power used by the microprocessor based on information provided by the at least one counter", as recited in Claim 1. Instead , Grochowski teaches a digital throttle that estimates a power consumption of a processor based on activity states of the processor's functional units. Specifically, the digital throttle of Grochowski estimates the power consumed by the processor by summing a power weight associated with each functional unit that is currently "on" (see column 3, lines 7-21 of Grochowski). As seen by referring to Figure 3 and corresponding description in Grochowski, the monitor circuit 320 serves to estimate an amount of power consumed by the processor by summing a power weight associated with each functional unit that is currently "on". Specifically, the monitor circuit 320 of Grochowski includes weight units 314 that provide power level to adder 324 when the activity state signal from its gate unit 310 is asserted and the adder 324 sums the power weights indicated by weights units and substrates the threshold level from the sum. The "accumulated power"

computed by the monitor circuit 320 of <u>Grochowski</u> is provided to a throttle circuit 330, which uses the "accumulated power" value to control the flow of instructions through pipeline 120. Importantly, Applicant submits that the throttle circuit 330 shown in Figures 3 and 4 of <u>Grochowski</u> has nothing do with estimating an amount of power used by a processor. Instead, the estimating of an amount of power used by the processor in <u>Grochowski</u> is accomplished in the monitor circuit 320.

In rejecting Claim 1, the Examiner asserts that the limitation that "the thermal control subsystem estimates the amount of power used by the microprocessor based on information provided by the at least one counter" is taught by <u>Grochowski</u>, citing Figure 4, unit 420, column 6-7, lines 66-8 of <u>Grochowski</u>. However, Applicant respectfully submits that the counter 420 (referred in the specification as counter "430") shown in Figure 4 of <u>Grochowski</u> has nothing do with estimating an amount of power used by the processor. Rather, the counter 420 shown in Figure 4 of <u>Grochowski</u> is used to increment a column index in control unit 420 from 0-127 (see column 7, lines 10-13 of <u>Grochowski</u>). There is nothing in <u>Grochowski</u> that teaches or suggests that the information provided by the counter 420 is used to estimate an amount of power used by the processor, as required by Claim 1. As noted above, the estimation of the power used by the processor, in <u>Grochowski</u>, is accomplished by the monitor circuit 320, shown in Figure 3. For these reasons, Applicant respectfully submits that <u>Grochowski</u> fails to teach or suggest a thermal control subsystem that "estimates the amount of power used by the microprocessor <u>based on information provided by the at least one counter</u>", as recited in Claim 1. Accordingly, Claim 1 and its dependent claims are not anticipated by <u>Grochowski</u>.

Analogous arguments to those above apply to independent Claims 8, 15 and 19. Specifically, with respect to Claim 8, Applicant respectfully submits that <u>Grochowski</u> fails to teach or suggest "estimating an amount of power used by a microprocessor based on the information provided by the at least one counter", as recited in Claim 8. With respect to Claim 15, Applicant submits that <u>Grochowski</u> fails to teach or suggest "the power usage estimator to estimate an amount of power used by a microprocessor based on information provided by the at least one counter", as recited in Claim 15. With respect to Claim 19, Applicant submits that <u>Grochowski</u> fails to teach or suggest "estimating an amount of power used by a microprocessor based on the information provided by the at least one counter", as recited in Claim 15. Accordingly, Claims 8, 15 and 19 and their dependent claims are not anticipated by <u>Grochowski</u>.

Additionally, with respect to Claim 27, Applicant respectfully submits that <u>Grochowski</u> fails to teach or suggest a thermal control subsystem that "estimates the amount of power used by the microprocessor based on information provided by the at least one counter", "wherein the at least one counter is implemented as a variable in software code", as recited in Claim 27. Accordingly, Claim 27 is patentable over <u>Grochowski</u>.

In view of the foregoing, Applicant respectfully submits that Claims 1, 8, 15, 19 and 27 are not anticipated by <u>Grochowski</u> and requests withdrawal of the rejection of these claims. Dependent Claims 2-7, 9-14, 16-18 and 20-26 are submitted as not being anticipated by <u>Grochowski</u> at least for the reasons given in support of their base Claims 1, 8, 15 and 19.

<u>CONCLUSION</u>

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance, and such action is earnestly solicited at the earliest possible date. If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly, extension of time fees. If a telephone interview would expedite the prosecution of this Application, the Examiner is invited to contact the undersigned at (310) 207-3800.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

Dated: November 5, 2003   By: _____

Walter T. Kim, Reg. No. 42,731

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025
(310) 207-3800